SEQUENCE LISTING

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<120> ISOLATION OF DROSOPHILA AND HUMAN POLYNUCLEOTIDES ENCODING PAR-1 KINASE, POLYPEPTIDES ENCODED BY THE POLYNUCLEOTIDES AND METHODS UTILIZING THE POLYNUCLEOTIDES AND POLYPEPTIDES

<130> PP-016093.002/200130.525

<140> US
<141> 2001-07-30

<160> 22

<170> FastSEQ for Windows Version 4.0

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<400> 3

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        35                  40                  45
Glu Gln Pro His Ile Gly Asn Tyr Arg Leu Leu Lys Thr Ile Gly Lys
    50                  55                  60
Gly Asn Phe Ala Lys Val Lys Leu Ala Arg His Ile Leu Thr Gly Arg
65                  70                  75                  80
Glu Val Ala Ile Lys Ile Ile Asp Lys Thr Gln Leu Asn Pro Thr Ser
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Leu Gln Lys Leu Phe Arg Glu Val Arg Ile Met Lys Ile Leu Asn His
            100                 105                 110
Pro Asn Ile Val Lys Leu Phe Glu Val Ile Glu Thr Glu Lys Thr Leu
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Tyr Leu Ile Met Glu Tyr Ala Ser Gly Gly Glu Val Phe Asp Tyr Leu
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Gln Ile Val Ser Ala Val Gln Tyr Cys His Gln Lys Arg Ile Val His
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Arg Asp Leu Lys Ala Glu Asn Leu Leu Leu Asp Ala Asp Met Asn Ile
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Lys Ile Ala Asp Phe Gly Phe Ser Asn Glu Phe Thr Val Gly Gly Lys
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Leu Asp Thr Phe Cys Gly Ser Pro Pro Tyr Ala Ala Pro Glu Leu Phe
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Gln Gly Lys Lys Tyr Asp Gly Pro Glu Val Asp Val Trp Ser Leu Gly
225                 230                 235                 240
Val Ile Leu Tyr Thr Leu Val Ser Gly Ser Leu Pro Phe Asp Gly Gln
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Arg Trp Ile Asn Ala Gly His Glu Glu Asp Glu Leu Lys Pro Phe Val
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Glu Pro Glu Leu Asp Ile Ser Asp Gln Lys Arg Ile Asp Ile Met Val
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Ala Lys Val Arg Pro Ser Ser Asp Leu Asn Asn Ser Thr Gly Gln Ser
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Pro His His Lys Val Gln Arg Ser Val Ser Ser Ser Gln Lys Gln Arg
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Arg Tyr Ser Asp His Ala Gly Pro Ala Ile Pro Ser Val Val Ala Tyr
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Pro Lys Arg Ser Gln Thr Ser Thr Ala Asp Ser Asp Leu Lys Glu Asp
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Gly Ile Ser Ser Arg Lys Ser Ser Gly Ser Ala Val Gly Gly Lys Gly
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Tyr Asn Gly Pro Pro Ala Ser Pro Ser Leu Ser His Glu Ala Thr Pro
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Leu Ser Gln Thr Arg Ser Arg Gly Ser Thr Asn Leu Phe Ser Lys Leu
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Thr Ser Lys Leu Thr Arg Arg Leu Pro Thr Glu Tyr Glu Arg Asn Gly
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Arg Tyr Glu Gly Ser Ser Arg Asn Val Ser Ala Glu Gln Lys Asp Glu
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Thr Thr Ser Ser Met Asp Pro Gly Asp Met Met Arg Glu Ile Arg Lys
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Val Leu Asp Ala Asn Asn Cys Asp Tyr Glu Gln Arg Glu Arg Phe Leu
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Glu Met Glu Val Cys Lys Leu Pro Arg Leu Ser Leu Asn Gly Val Arg
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<212> PRT
<213> Homo sapiens

<400> 6

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Lys Val Lys Leu Ala Arg His Ile Leu Thr Gly Lys Glu Val Ala Val
        35                  40                  45
Lys Ile Ile Asp Lys Thr Gln Leu Asn Ser Ser Ser Leu Gln Lys Leu
    50                  55                  60
Phe Arg Glu Val Arg Ile Met Lys Val Leu Asn His Pro Asn Ile Val
65                  70                  75                  80
Lys Leu Phe Glu Val Ile Glu Thr Glu Lys Thr Leu Tyr Leu Val Met
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Glu Tyr Ala Ser Gly Gly Glu Val Phe Asp Tyr Leu Val Ala His Gly
            100                 105                 110
Arg Met Lys Glu Lys Glu Ala Arg Ala Lys Phe Arg Gln Ile Val Ser
        115                 120                 125
Ala Val Gln Tyr Cys His Gln Lys Phe Ile Val His Arg Asp Leu Lys
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Cys Gly Ser Pro Pro Tyr Ala Ala Pro Glu Leu Phe Gln Gly Lys Lys
            180                 185                 190
Tyr Asp Gly Pro Glu Val Asp Val Trp Ser Leu Gly Val Ile Leu Tyr
        195                 200                 205
Thr Leu Val Ser Gly Ser Leu Pro Phe Asp Gly Gln Asn Leu Lys Glu
    210                 215                 220
Leu Arg Glu Arg Val Leu Arg Gly Lys Tyr Arg Ile Pro Phe Tyr Met
225                 230                 235                 240
Ser Thr Asp Cys Glu Asn Leu Leu Lys Lys Phe Leu Ile Leu Asn Pro
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Ser Lys Arg Gly Thr Leu Glu Gln Ile Met Lys Asp Arg Trp Met Asn
            260                 265                 270
Val Gly His Glu Asp Asp Glu Leu Lys Pro Tyr Val Glu Pro Leu Pro
        275                 280                 285
Asp Tyr Lys Asp Pro Arg Arg Thr Glu Leu Met Val Ser Met Gly Tyr
    290                 295                 300
Thr Arg Glu Glu Ile Gln Asp Ser Leu Val Gly Gln Arg Tyr Asn Glu
305                 310                 315                 320
Val Met Ala Thr Tyr Leu Leu Leu Gly Tyr Lys Ser Ser Glu Leu Glu
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Gly Asp Thr Ile Thr Leu Lys Pro Arg Pro Ser Ala Asp Leu Thr Asn
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Ser Ser Ala Pro Ser Pro Ser His Lys Val Gln Arg Ser Val Ser Ala
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Asn Pro Lys Gln Arg Arg Phe Ser Asp Gln Ala Gly Pro Ala Ile Pro
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Thr Ser Asn Ser Tyr Ser Lys Lys Thr Gln Ser Asn Asn Ala Glu Asn
385                 390                 395                 400
Lys Arg Pro Glu Glu Asp Arg Glu Ser Gly Arg Lys Ala Ser Ser Thr
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Ala Lys Val Pro Ala Ser Pro Leu Pro Gly Leu Glu Arg Lys Lys Thr
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Thr Pro Thr Pro Ser Thr Asn Ser Val Leu Ser Thr Ser Thr Asn Arg
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Ser Arg Asn Ser Pro Leu Leu Glu Arg Ala Ser Leu Gly Gln Ala Ser
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Ile Gln Asn Gly Lys Asp Ser Thr Ala Pro Gln Arg Val Pro Val Ala
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Ser Pro Ser Ala His Asn Ile Ser Ser Ser Gly Gly Ala Pro Asp Arg
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Thr Asn Phe Pro Arg Gly Val Ser Ser Arg Ser Thr Phe His Ala Gly
            500                 505                 510
Gln Leu Arg Gln Val Arg Asp Gln Gln Asn Leu Pro Tyr Gly Val Thr
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Pro Ala Ser Pro Ser Gly His Ser Gln Gly Arg Arg Gly Ala Ser Gly
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Ser Ile Phe Ser Lys Phe Thr Ser Lys Phe Val Arg Arg Asn Leu Asn
545                 550                 555                 560
Glu Pro Glu Ser Lys Asp Arg Val Glu Thr Leu Arg Pro His Val Val
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Pro Arg Ser Leu Arg Phe Thr Trp Ser Met Lys Thr Thr Ser Ser Met
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Glu Pro Asn Glu Met Met Arg Glu Ile Arg Lys Val Leu Asp Ala Asn
    610                 615                 620
Ser Cys Gln Ser Glu Leu His Glu Lys Tyr Met Leu Leu Cys Met His
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Gly Thr Pro Gly His Glu Asp Phe Val Gln Trp Glu Met Glu Val Cys
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Lys Leu Pro Arg Leu Ser Leu Asn Gly Val Arg Phe Lys Arg Ile Ser
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Gly Thr Ser Met Ala Phe Lys Asn Ile Ala Ser Lys Ile Ala Asn Glu
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<210> 7
<211> 2222
<212> DNA
<213> Homo sapiens

<400> 7

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<210> 8
<211> 2222
<212> DNA
<213> Homo sapiens

<400> 8
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<210> 9
<211> 724
<212> PRT
<213> Homo sapiens

<400> 9

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            20                  25                  30
Asn Met Ile Arg Gly Arg Asn Ser Ala Thr Ser Ala Asp Glu Gln Pro
        35                  40                  45
His Ile Gly Asn Tyr Arg Leu Leu Lys Thr Ile Gly Lys Gly Asn Phe
    50                  55                  60
Ala Lys Val Lys Leu Ala Arg His Ile Leu Thr Gly Lys Glu Val Ala
65                  70                  75                  80
Val Lys Ile Ile Asp Lys Thr Gln Leu Asn Ser Ser Ser Leu Gln Lys
                85                  90                  95
Leu Phe Arg Glu Val Arg Ile Met Lys Val Leu Asn His Pro Asn Ile
            100                 105                 110
Val Lys Leu Phe Glu Val Ile Glu Thr Glu Lys Thr Leu Tyr Leu Val
        115                 120                 125
Met Glu Tyr Ala Ser Gly Gly Glu Val Phe Asp Tyr Leu Val Ala His
    130                 135                 140
Gly Arg Met Lys Glu Lys Glu Ala Arg Ala Lys Phe Arg Gln Ile Val
145                 150                 155                 160
Ser Ala Val Gln Tyr Cys His Gln Lys Phe Ile Val His Arg Asp Leu
                165                 170                 175
Lys Ala Glu Asn Leu Leu Leu Asp Ala Asp Met Asn Ile Lys Ile Ala
            180                 185                 190
Asp Phe Gly Phe Ser Asn Glu Phe Thr Phe Gly Asn Lys Leu Asp Thr
        195                 200                 205
Phe Cys Gly Ser Pro Pro Tyr Ala Ala Pro Glu Leu Phe Gln Gly Lys
    210                 215                 220
Lys Tyr Asp Gly Pro Glu Val Asp Val Trp Ser Leu Gly Val Ile Leu
225                 230                 235                 240
Tyr Thr Leu Val Ser Gly Ser Leu Pro Phe Asp Gly Gln Asn Leu Lys
                245                 250                 255
Glu Leu Arg Glu Arg Val Leu Arg Gly Lys Tyr Arg Ile Pro Phe Tyr
            260                 265                 270
Met Ser Thr Asp Cys Glu Asn Leu Leu Lys Lys Phe Leu Ile Leu Asn
        275                 280                 285
Pro Ser Lys Arg Gly Thr Leu Glu Gln Ile Met Lys Asp Arg Trp Met
    290                 295                 300
Asn Val Gly His Glu Asp Asp Glu Leu Lys Pro Tyr Val Glu Pro Leu
305                 310                 315                 320
Pro Asp Tyr Lys Asp Pro Arg Arg Thr Glu Leu Met Val Ser Met Gly
                325                 330                 335
Tyr Thr Arg Glu Glu Ile Gln Asp Ser Leu Val Gly Gln Arg Tyr Asn
            340                 345                 350
Glu Val Met Ala Thr Tyr Leu Leu Leu Gly Tyr Lys Ser Ser Glu Leu
        355                 360                 365
Glu Gly Asp Thr Ile Thr Leu Lys Pro Arg Pro Ser Ala Asp Leu Thr
    370                 375                 380
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Ala Asn Pro Lys Gln Arg Arg Phe Ser Asp Gln Ala Gly Pro Ala Ile
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Pro Thr Ser Asn Ser Tyr Ser Lys Lys Thr Gln Ser Asn Asn Ala Glu
            420                 425                 430
Asn Lys Arg Pro Glu Glu Asp Arg Glu Ser Gly Arg Lys Ala Ser Ser
        435                 440                 445
Thr Ala Lys Val Pro Ala Ser Pro Leu Pro Gly Leu Glu Arg Lys Lys
    450                 455                 460
Thr Thr Pro Thr Pro Ser Thr Asn Ser Val Leu Ser Thr Ser Thr Asn
465                 470                 475                 480
Arg Ser Arg Asn Ser Pro Leu Leu Glu Arg Ala Ser Leu Gly Gln Ala
                485                 490                 495
Ser Ile Gln Asn Gly Lys Asp Ser Thr Ala Pro Gln Arg Val Pro Val
            500                 505                 510
Ala Ser Pro Ser Ala His Asn Ile Ser Ser Ser Gly Gly Ala Pro Asp
        515                 520                 525
Arg Thr Asn Phe Pro Arg Gly Val Ser Ser Arg Ser Thr Phe His Ala
    530                 535                 540
Gly Gln Leu Arg Gln Val Arg Asp Gln Gln Asn Leu Pro Tyr Gly Val
545                 550                 555                 560
Thr Pro Ala Ser Pro Ser Gly His Ser Gln Gly Arg Arg Gly Ala Ser
                565                 570                 575
Gly Ser Ile Phe Ser Lys Phe Thr Ser Lys Phe Val Arg Arg Asn Leu
            580                 585                 590
Asn Glu Pro Glu Ser Lys Asp Arg Val Glu Thr Leu Arg Pro His Val
        595                 600                 605
Val Gly Ser Gly Gly Asn Asp Lys Glu Lys Glu Glu Phe Arg Glu Ala
    610                 615                 620
Lys Pro Arg Ser Leu Arg Phe Thr Trp Ser Met Lys Thr Thr Ser Ser
625                 630                 635                 640
Met Glu Pro Asn Glu Met Met Arg Glu Ile Arg Lys Val Leu Asp Ala
                645                 650                 655
Asn Ser Cys Gln Ser Glu Leu His Glu Lys Tyr Met Leu Leu Cys Met
            660                 665                 670
His Gly Thr Pro Gly His Glu Asp Phe Val Gln Trp Glu Met Glu Val
        675                 680                 685
Cys Lys Leu Pro Arg Leu Ser Leu Asn Gly Val Arg Phe Lys Arg Ile
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Ser Gly Thr Ser Met Ala Phe Lys Asn Ile Ala Ser Lys Ile Ala Asn
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Glu Leu Lys Leu
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<210> 10
<211> 2706
<212> DNA
<213> Homo sapiens

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agacagaaca tccccccggtg tagaaactcc attacgtcag caacagatga acagcctcac 180

attggaaatt accgtttaca aaaaacaata gggaagggaa attttgccaa agtcaaattg 240
gcaagacacg ttctaactgg tagagaggtt gctgtgaaaa taatagacaa aactcagcta 300
aatcctacca gtctacaaaa gttatttcga gaagtacgga taatgaagat actgaatcat 360
cctaatatag taaaattgtt tgaagttatt gaaacagaga agactctcta tttagtcatg 420
gaatacgcga gtgggggtga agtatttgat tacttagttg cccatggaag aatgaaagag 480
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aaaattgctg actttggttt tagtaatgaa tttacagttg ggaacaaatt ggacacattt 660
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<210> 11
<211> 2706
<212> DNA
<213> Homo sapiens

<400> 11
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<210> 12
<211> 795
<212> PRT
<213> Homo sapiens

<400> 12
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Asn His Thr Ser Val Asp Gly Tyr Thr Glu Pro His Ile Gln Pro Thr
            20                  25                  30
Lys Ser Ser Ser Arg Gln Asn Ile Pro Arg Cys Arg Asn Ser Ile Thr
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          35                  40                  45
Ser Ala Thr Asp Glu Gln Pro His Ile Gly Asn Tyr Arg Leu Gln Lys
    50                  55                  60
Thr Ile Gly Lys Gly Asn Phe Ala Lys Val Lys Leu Ala Arg His Val
65                  70                  75                  80
Leu Thr Gly Arg Glu Val Ala Val Lys Ile Ile Asp Lys Thr Gln Leu
                85                  90                  95
Asn Pro Thr Ser Leu Gln Lys Leu Phe Arg Glu Val Arg Ile Met Lys
            100                 105                 110
Ile Leu Asn His Pro Asn Ile Val Lys Leu Phe Glu Val Ile Glu Thr
        115                 120                 125
Glu Lys Thr Leu Tyr Leu Val Met Glu Tyr Ala Ser Gly Gly Glu Val
    130                 135                 140
Phe Asp Tyr Leu Val Ala His Gly Arg Met Lys Glu Lys Glu Ala Arg
145                 150                 155                 160
Ala Lys Phe Arg Gln Ile Val Ser Ala Val Gln Tyr Cys His Gln Lys
                165                 170                 175
Tyr Ile Val His Arg Asp Leu Lys Ala Glu Asn Leu Leu Leu Asp Gly
            180                 185                 190
Asp Met Asn Ile Lys Ile Ala Asp Phe Gly Phe Ser Asn Glu Phe Thr
        195                 200                 205
Val Gly Asn Lys Leu Asp Thr Phe Cys Gly Ser Pro Pro Tyr Ala Ala
    210                 215                 220
Pro Glu Leu Phe Gln Gly Lys Lys Tyr Asp Gly Pro Glu Val Asp Val
225                 230                 235                 240
Trp Ser Leu Gly Val Ile Leu Tyr Thr Leu Val Ser Gly Ser Leu Pro
                245                 250                 255
Phe Asp Gly Gln Asn Leu Lys Glu Leu Arg Glu Arg Val Leu Arg Gly
            260                 265                 270
Lys Tyr Arg Ile Pro Phe Tyr Met Ser Thr Asp Cys Glu Asn Leu Leu
        275                 280                 285
Lys Lys Leu Leu Val Leu Asn Pro Ile Lys Arg Gly Ser Leu Glu Gln
    290                 295                 300
Ile Met Lys Asp Arg Trp Met Asn Val Gly His Glu Glu Glu Glu Leu
305                 310                 315                 320
Lys Pro Tyr Thr Glu Pro Asp Pro Asp Phe Asn Asp Thr Lys Arg Ile
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Asp Ile Met Val Thr Met Gly Phe Ala Arg Asp Glu Ile Asn Asp Ala
            340                 345                 350
Leu Ile Asn Gln Lys Tyr Asp Glu Val Met Ala Thr Tyr Ile Leu Leu
        355                 360                 365
Gly Arg Lys Pro Pro Glu Phe Glu Gly Gly Glu Ser Leu Ser Ser Gly
    370                 375                 380
Asn Leu Cys Gln Arg Ser Arg Pro Ser Ser Asp Leu Asn Asn Ser Thr
385                 390                 395                 400
Leu Gln Ser Pro Ala His Leu Lys Val Gln Arg Ser Ile Ser Ala Asn
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Gln Lys Gln Arg Arg Phe Ser Asp His Ala Gly Pro Ser Ile Pro Pro
            420                 425                 430
Ala Val Ser Tyr Thr Lys Arg Pro Gln Ala Asn Ser Val Glu Ser Glu
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Gln Lys Glu Glu Trp Asp Lys Asp Val Ala Arg Lys Leu Gly Ser Thr
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Thr Val Gly Ser Lys Ser Glu Met Thr Ala Ser Pro Leu Val Gly Pro
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Glu Arg Lys Lys Ser Ser Thr Ile Pro Ser Asn Asn Val Tyr Ser Gly
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Gly Ser Met Ala Arg Arg Asn Thr Tyr Val Cys Glu Arg Thr Thr Asp
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Arg Tyr Val Ala Leu Gln Asn Gly Lys Asp Ser Ser Leu Thr Glu Met
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Ser Val Ser Ser Ile Ser Ser Ala Gly Ser Ser Val Ala Ser Ala Val
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Pro Ser Ala Arg Pro Arg His Gln Lys Ser Met Ser Thr Ser Gly His
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Pro Ile Lys Val Thr Leu Pro Thr Ile Lys Asp Gly Ser Glu Ala Tyr
                565                 570                 575
Arg Pro Gly Thr Thr Gln Arg Val Pro Ala Ala Ser Pro Ser Ala His
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Ser Ile Ser Thr Ala Thr Pro Asp Arg Thr Arg Phe Pro Arg Gly Ser
        595                 600                 605
Ser Ser Arg Ser Thr Phe His Gly Glu Gln Leu Arg Glu Arg Arg Ser
    610                 615                 620
Val Ala Tyr Asn Gly Pro Pro Ala Ser Pro Ser His Glu Thr Gly Ala
625                 630                 635                 640
Phe Ala His Ala Arg Arg Gly Thr Ser Thr Gly Ile Ile Ser Lys Ile
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Thr Ser Lys Phe Val Arg Arg Asp Pro Ser Glu Gly Glu Ala Ser Gly
            660                 665                 670
Arg Thr Asp Thr Ser Arg Ser Thr Ser Gly Glu Pro Lys Glu Arg Asp
        675                 680                 685
Lys Glu Glu Gly Lys Asp Ser Lys Pro Arg Ser Leu Arg Phe Thr Trp
    690                 695                 700
Ser Met Lys Thr Thr Ser Ser Met Asp Pro Asn Asp Met Met Arg Glu
705                 710                 715                 720
Ile Arg Lys Val Leu Asp Ala Asn Asn Cys Asp Tyr Glu Gln Lys Glu
                725                 730                 735
Arg Phe Leu Leu Phe Cys Val His Gly Asp Ala Arg Gln Asp Ser Leu
            740                 745                 750
Val Gln Trp Glu Met Glu Val Cys Lys Leu Pro Arg Leu Ser Leu Asn
        755                 760                 765
Gly Val Arg Phe Lys Arg Ile Ser Gly Thr Ser Ile Ala Phe Lys Asn
    770                 775                 780
Ile Ala Ser Lys Ile Ala Asn Glu Leu Lys Leu
785                 790                 795

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<213> Artificial Sequence

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<210> 14
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<223> Antisense oligonucleotide

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<212> DNA
<213> Artificial Sequence

<220>
<223> Antisense oligonucleotide

<400> 15
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<210> 16
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Antisense oligonucleotide

<400> 16
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<210> 17
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<212> DNA
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<220>
<223> Antisense oligonucleotide

<400> 17
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<210> 18
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<212> DNA
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<220>
<223> Antisense oligonucleotide

<400> 18
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<210> 19
<211> 3154
<212> DNA
<213> Drosophilia sp.

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<211> 3154
<212> DNA
<213> Drosophila sp.

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<211> 832
<212> PRT
<213> Drosophila sp.

<400> 21

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			20					25				30			
Ala	Ala	Pro	Val	Ser	Ser	Ala	Thr	Asn	Ala	Val	Pro	Pro	Leu	Ala	Ala
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Val	Ser	Ser	Thr	Thr	Ala	Thr	Tyr	Ala	Thr	Asn	Ser	Ile	Ser	Thr	Ser
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Ser	His	Ser	Val	Lys	Asp	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Gln	His
65					70					75					80
Asp	Ser	Ala	Asn	Ala	Asn	Ile	Val	Ser	Leu	Pro	Pro	Thr	Thr	Thr	Pro
				85					90					95	
Val	Ala	Asn	Thr	Asn	Thr	Met	Met	Pro	Ile	Val	Thr	Ser	Ser	Asn	Ser
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Ser	Ala	Ser	Ala	Ala	Asn	Thr	Asn	His	Ser	His	Gln	His	Ser	His	Gln
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His	His	His	His	Val	Ala	Asn	Asn	Met	Thr	Thr	Asp	Gly	Ala	Arg	Leu
				165					170					175	
Ser	Ser	Asn	Asn	Ser	Ala	Val	Val	Ala	Ser	Ser	Ala	Ile	Asn	His	His
			180					185					190		
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Ser	Ser	Ala	Lys	Gly	Ser	Pro	Asn	Met	Gln	Met	Arg	Ser	Ser	Ala	Pro
225					230					235					240
Met	Arg	Trp	Arg	Ala	Thr	Glu	Glu	His	Ile	Gly	Lys	Tyr	Lys	Leu	Ile
				245					250					255	
Lys	Thr	Ile	Gly	Lys	Gly	Asn	Phe	Ala	Lys	Val	Lys	Leu	Ala	Lys	His
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Leu	Pro	Thr	Gly	Lys	Glu	Val	Ala	Ile	Lys	Ile	Ile	Asp	Lys	Thr	Gln
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Lys Met Leu Asp His Pro Asn Ile Val Lys Leu Phe Gln Val Ile Glu
305                 310                 315                 320
Thr Glu Lys Thr Leu Tyr Leu Ile Met Glu Tyr Ala Ser Gly Gly Glu
                325                 330                 335
Val Phe Asp Tyr Leu Val Leu His Gly Arg Met Lys Glu Lys Glu Ala
            340                 345                 350
Arg Val Lys Phe Arg Gln Ile Val Ser Ala Val Gln Tyr Cys His Gln
        355                 360                 365
Lys Arg Ile Ile His Arg Asp Leu Lys Ala Glu Asn Leu Leu Leu Asp
    370                 375                 380
Ser Glu Leu Asn Ile Lys Ile Ala Asp Phe Gly Phe Ser Asn Glu Phe
385                 390                 395                 400
Thr Pro Gly Ser Lys Leu Asp Thr Phe Cys Gly Ser Pro Pro Tyr Ala
                405                 410                 415
Ala Pro Glu Leu Phe Gln Gly Lys Lys Tyr Asp Gly Pro Glu Val Asp
            420                 425                 430
Val Trp Ser Leu Gly Val Ile Leu Tyr Thr Leu Val Ser Gly Ser Leu
        435                 440                 445
Pro Phe Asp Gly Ser Thr Leu Arg Glu Leu Arg Glu Arg Val Leu Arg
    450                 455                 460
Gly Lys Tyr Arg Ile Pro Phe Tyr Met Ser Thr Asp Cys Glu Asn Leu
465                 470                 475                 480
Leu Arg Lys Phe Leu Val Leu Asn Pro Ala Lys Arg Ala Ser Leu Glu
                485                 490                 495
Thr Ile Met Gly Asp Lys Trp Met Asn Met Gly Phe Glu Glu Asp Glu
            500                 505                 510
Leu Lys Pro Tyr Ile Glu Pro Lys Ala Asp Leu Ala Asp Pro Lys Arg
        515                 520                 525
Ile Glu Ala Leu Val Ala Met Gly Tyr Asn Arg Ser Glu Ile Glu Ala
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Ser Leu Ser Gln Val Arg Tyr Asp Asp Val Phe Ala Thr Tyr Leu Leu
545                 550                 555                 560
Leu Gly Arg Lys Ser Thr Asp Pro Glu Ser Asp Gly Ser Arg Ser Gly
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Ser Ser Leu Ser Leu Arg Asn Ile Ser Gly Asn Asp Ala Gly Ala Asn
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Ala Gly Ser Ala Ser Val Gln Ser Pro Thr His Arg Gly Val His Arg
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Arg Gln Asn Thr Ile Asp Ser Ala Thr Ile Lys Glu Asn Thr Ala Arg
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Leu Ala Ala Gln Asn Gln Arg Pro Ala Ser Ala Thr Gln Lys Met Leu
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Thr Thr Ala Asp Thr Thr Leu Asn Ser Pro Ala Lys Pro Arg Thr Ala
705                 710                 715                 720
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Val Lys Ser Ser Arg His Phe Pro Arg Asn Val Pro Ser Arg Ser Thr
    770                 775                 780
Phe His Ser Gly Gln Thr Arg Ala Arg Asn Asn Thr Ala Leu Glu Tyr
785                 790                 795                 800
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<211> 36
<212> PRT
<213> Homo sapiens

<400> 22

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        35
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